Agricultural Department.

AMONG THE FARMERS.

CUT WORMS.

(By H. A. Gossard, Ento. Fla. Exp. Station.)

Cut worms are the larval forms of a family of inconspicuous, dull colored, night flying moths, the Noctuidae. The moths are not often seen in the daytime, as they hide in dark corners, under dense vegetation, beneath boards, clods or stones, or settle upon gray or dark surfaces such as tree trunks or fence boards, their colors harmonizing so well with the objects upon which they rest, that only the eye of the practiced observer is likely to detect them at all. They come quite readily to lights but not in sufficient numbers to pay for trapping them in this way. They are readily decoyed at night to sweetened baits of penetrating odor, such as fermented molasses, or syrup mixed with a little beer or rum. Sugar dissolved in water may be substituted for syrup. The collector avails himself of this habit, but it hardly pays to catch them in this way from an economic standpoint.

There are many species of cut worm moths with varying habits and differing details of life history. Most of the larvae are comparatively naked caterpillars, living near the surface of the ground, though some have a climbing habit and ascend trees. The eggs are laid in grass land, lettuce beds, weedy patches or in any place which supports a low, dense, succulent vegetation. They are rarely laid on or in the ground, being normally deposited on the leaves among which the moths hide themselves. The full grown worms are from an inch to an inch and a-half or more in length and the number of broods varies from one to three, according to the species, though one brood is the general rule. In Florida some of the pests may be found at all seasons and special care to get rid of them must be taken upon land from which a dense, low crop has just been removed.

The most effective treatment is found in a poisoned bait consisting of wheat bran and Paris green, just enough of the latter to tinge the mass with a greenish color, to which a little syrup may be added with advantage. Corn meal or cotton seed meal may be substituted for the bran. Immediately after the ground is plowed scatter this bait in little heaps all over the field and leave for two or three nights before planting the new crop. The insects having nothing else to feed upon will devour the poison greedily and the dead will very soon be found in numbers on the surface. If the plants of the new crop are set out singly a ring of the poisoned mixture may be placed around each one or if planted in rows a line of it may be distributed along each side of the row. The observance of these precautions will generally give very satisfactory results.

In small gardens, plants such as tomatoes and cabbages are sometimes planted each one in a cone of thick paper, heavy brown wrapping paper will do, with the upper edge or base of the cone projecting about two inches above the ground and the apex extending about three or four inches below. This cone does not interfere with the passage of moisture to the plant and will not rot down until the plant has outgrown the danger of cut worm attack. It is a good plan to make vertical holes having a depth of a foot or more in infested ground and with perfectly smooth and firm sides. A sharpened broom handle is a suitable instrument with which to make such holes. The worms will retreat into these holes to hide and are unable to crawl out again. Where cultivation is practically continuous this plant will not do.

Little protection can be secured from choice of fertilizers, though Kainit has some value in destroying them. Cut worms are often destroyed by parasites, the most common of which are the maggots of large, gray bristly flies, closely related to the well known flesh flies infesting putrid meats. The uninformed are often puzzled by the presence of these maggots within the bodies of the cut worms and suppose them to be younger cut worms in the process of development. Their true nature can be proven by keeping a parasitized insect in a bottle with a little moist earth and stopped with a cotton wad until the flies emerge.

HOG CHOLERA AND SWINE PLAGUE.

(By Dr. Chas. F. Dawson, Station Veterinarian.)

Hog cholera and swine plague are by far the most important swine diseases. The former primarily attacks the intestines and secondarily the lungs; while the latter attacks the lungs first, and may secondarily affect the digestive tract. Each disease has its specific causative micro-organism, these germs being carried from sick to healthy hogs by vermin, birds, dogs, winds, streams and upon the feet of man. The germ of hog cholera can live for months in the soil, regardless of the character of the climate. Swine plague, on the other hand, rapidly perishes in the soil and retains its vitality by getting into the mouths and throats of healthy animals. In most outbreaks of so-called hog cholera we find both diseases co-existing.

Although the annual losses aggregate millions of dollars, some breeders and speculators take a roseate view of the matter, claiming it is the losses due to hog cholera which keeps the market from becoming glutted with cheap meat. The more numerous consumer is, then, the most affected. The hog is one of the most prolific and profitable of farm animals, and there seems no good reason why our Florida markets should be supplied so largely with hog products from the Chicago packing houses.

Hog cholera may occur anywhere. Some localities and even some individuals rarely or never are troubled with the disease. Such places and persons are extremely fortunate. It is true in cases where the hog is well cared for, meaning clean dry pens and plenty of nutritious and easily assimilated food, that losses from diseases of all kinds are reduced to a minimum. Hogs that have no regular sleeping places, would be more exempt from hog cholera than those restricted to small fields and to a regular sleeping place.

Hog cholera may be of two kinds. It may run an acute course, or be of a hemorrhagic nature, destroying a large percentage of a herd in a few days, or it may become chronic and last for months. In the acute type there will be no ulceration of the intestines, the blood being the main organ affected.

In the chronic type the losses are not so severe; the symptoms are more pronounced, and it is probably this form which is best known to breeders. As symptoms there will be dullness, shivering, loss of appetite, thirst, fever and redness of skin inside the thigh and along the belly. In a few days this redness assumes a purple or violet color. A rash appears, accompanied by spots of a dark red or black reaching an inch in diameter. The tongue is covered with brownish fur. The animal is sore to the touch, grunts and screams when handled. It moves feebly, is unsteady in gait and has a plaintive cry. Frequently a cough which is hard and barking lasts throughout the disease. Vomiting may be present. Constipation is sometimes present, and when this persists, the outbreak is unusually fatal. Generally the bowels loosen by the third day and the diarrhoea is profuse, black in color and foul smelling. The pulse now becomes quite feeble, the cough frequent, painful and exhausting. The breathing is hurried and weakness increases till the animal gets down and is unable to rise on its hind legs. Just before death there may be muscular jerkings, or sudden attempts to rise, accompanied by screams. In some cases swellings appear, and great lameness is a feature. The ears may drop off, as may the end of the snout, and the toes.

The losses in hog cholera frequently reach 80 or 90 per cent. The economic importance of this disease is such that scientists have for years endeavored to produce a substance, which, when injected into the hog would either render the animal insusceptible or cure it when affected. These efforts have not met with the success they have deserved. It is possible, however, that a preventive and curative serum, made by the same methods as are employed in the production of the preventive and curative serum for diptheria in man, will be discovered. Dozens of so-called "cures" for hog cholera are upon the market at present. Some of them have advocates who make ridiculous claims as to their efficacy. Breeders fall into the trap, forgetting or being ignorant of the fact that, in many outbreaks of hog cholera, like any other disease, the losses are frequently light. It is in these outbreaks that the "cure" man appears, and by cleaning up the pens, or building fresh ones, and using soft, bland feed, along with his "condition powders" succeeds in bringing the most of them through the attack; something the owner could have done just as well.

Some years ago the Bureau of Animal Industry made field tests with various medicines, looking for a combination which could be easily administered, and the following powder compound was the result. It has been given sufficient trial to warrant its being recommended as the best treatment known today for hog cholera and swine plague. The formula is al follows:

Wood charcoal, 1 pound; sulphur, 1 pound; salt, 2 pounds; bicarbonate of sodium, 2 pounds; sulphate of sodium, 1 pound; hyposulphate of sodium, 2 pounds; sulphide of antimony, 1 pound. Mix these thoroughly, and give one tablespoonful to each 200 pounds of weight of hog once a day mixed with soft feed. Where the animal won't eat, dissolve the proper dose in water and pour slowly, with frequent pauses, small quantities into the mouth between the cheek and teeth.

The best fertilizer for the flower garden is old, well-rotted manure from the cowyard. But those living in the city cannot obtain this. A good substitute for it is fine bonemeal. Use it in the proportion of half a pound to a square yard. Scatter it over the soil after you have spaded and pulverized it, and work it in well with a rake.—April Ladies' Home Journal.

Subscribe for the Tallahasseean. One Dollar a year.

Educational Department.

(Address all articles intended for this column to W. F. King, Hawthorne Fla., or M. Atta Hancock, Archer, Fla.)

Some of the readers of the educational column will remember a short talk by Supt. Truedley at a meeting of the National Educational Association in Jacksonville. We have heard several of the foremost public speakers of this country, but never a man who impressed us more by his personality.—[Editors.

PARENTS AND TEACHERS.

By Prof. Truedley, Youngstown, Ohio.

You may recall the following remarks, in substance, attributed to Socrates: "Callias," said the seer, "if our children were calves or foals of horses, we should know what to do with them. We should send for a trainer of horses or for one who knows how to deal with cattle. But since they are children, what advice do you give?"

These words of the magnificent teacher, so far beyond his day and generation that he had to drink the hemlock, may well come home to another day and generation of whom might be quoted these words from Wordsworth: "The world is too much with us." As a schoolmaster, I am prone to magnify my calling. But when I read how Luther, in his day, said of the importance of men and women that the strength of a city does not consist in its walls, its public buildings, or its mural decorations, but in the abundance of its citizens, honest, sincere and well-educated; when I learn how Melanchthon used to address his students as—"Hail, reverend priests, doctors, licentiates, superintendents! Hail! most noble, most prudent, most learned lords, consuls, praetors, judges, prefects, chancellors, secretaries, magistrates, professors;" and when asked why he did so, replied: "I am not jesting; my speech is serious; for I look on these little boys, not as they are now, but with a view to the purpose of the Divine mind, on account of which they are delivered to us for instruction;" and when I read the tender words of Comenius as to the beauty, nay almost divinity of childhood, tesimonies out of what may well be called a twilight age; then I think I see more clearly that there is only one duty devolved upon each generation to which all others are and ought to be subservient, viz.: to bring it to pass that the generation springing from its loins shall be as much more capable of its part in human life, as the accumulation of spiritual power on the part of its ancestors will permit.

Now in this work of education, there are really only two factors—the home and the school. Of course each human being is born into a world, whose great educative agencies are the home, society, the State, and the church. But the function of the latter three are, in early years, in formative years, merged in the home, and later are, with the home, merged in the school, which these fundamental powers have called into being.

The home fits for the school. The school with the home fits for life. Through these vestibules, youth is brought to the threshold of that larger life whose beckoning forms appeal to every power, to every aspiration, to every hope within him. These two agencies are absolutely bound together in this work of education. Both minister to his social needs and both become the social life and stimulus and introduction to the larger and more independent life.

Both also introduce the child to those limitations and restrictions which really enfranchise him under the aspect of the State. Here he learns to obey, to desire to obey, and to realize that obedience to just law means self-enfranchisement.

And best of all, through these he becomes to learn or ought to learn of that Divine law and law-giver, whom to know is to "have life eternal."

I have often likened the home to that part of the Jewish tabernacle known as the Holy of Holies, only with the difference that here are two high ministers ministrants, a priest and a priestess—father and mother—who go in and out—not once a year but day and night. And carrying the analogy farther, the next most sacred place—the holy place—is the school, before whose altar ministers the good teacher.

In scope and function these two instrumentalities are identical. The home is authorized to carry farther than the school and in a more intense way, the religious training. The school must and does offer a larger life socially and must co-operate thoroughly in the work of preparing for citizenship. I must not come short of the home in any particular in moral instruction, and in addition its peculiar function is the training to intellectual power and the proffering to the child the keys of the earthly life. The home is and should be the more powerful as it is the more fundamental agency. The school, however, is, and must be, next to the home, the most persuasive and continuously persuasive in the mighty work of education.

(To be continued.)

CHURCH NOTICE.

The Wesleyan Methodists of Tallahassee have preaching services every Sunday at 11 a. m. and 7:30 p. m. Sabbath school at 9:30 a. m.; class meeting at 6:30 p. m.; regular mid week prayer service on Thursday evening at 7 o'clock. Everybody welcome.

4m Rev. F. E. FITCH, P. C.

T. S. E. Railroad

Will run a passenger train every day in the week except Sunday.

Schedule effective April 1, 1901.

Read down.		Read up
11:15 p. m.	Lv.... Wacissa....Ar.	a. m. 9:15
10:00 p. m.	Ar..Tallahassee...Lv. (Bell Air Crossing)	a. m. 8:00

Tickets will be for sale at Dr. Lewis' Drug Store, Thomas City, and at the train twenty minutes before leaving.

For information as to freight or express, apply to Dr. Lewis, agent, or Capt. Thomas, conductor at train.

Hack will meet train at Bell Air crossing, and returning leave Tallahassee in time to meet train for Thomas City.